

WHAT IS CLAIMED IS:

1. A method of fabricating a semiconductor device,  
comprising the steps of:

(a) providing a wafer having a plurality of semiconductor  
elements formed thereon;

(b) affixing a protective tape to a first face of the  
wafer;

(c) grinding a second face of the wafer opposite to the  
first face;

(d) affixing a die bonding film to the second face of the  
wafer;

(e) affixing a dicing tape over the die bonding film on  
the second face of the wafer;

(f) peeling off the protective tape from the first face of  
the wafer; and

(g) dicing the wafer.

2. The method according to claim 1,

wherein the die bonding film contains a thermoplastic  
resin material.

3. The method according to claim 1,

wherein the first face of the wafer is a face on  
which the plural semiconductor elements are formed.

4. The method according to claim 1,

wherein the die bonding film functions as an adhesive

layer at the time of die-bonding chips obtained by dicing the wafer.

5. The method according to claim 1, further comprising a step of heating the die bonding film after the step (e) and before the step (f).

6. The method according to claim 1, further comprising a step of heating the die bonding film after the step (f) and before the step (g).

7. The method according to claim 1, further comprising, after the step (e) and before the step (f), a step of heating the die bonding film for improving the adherence between the die bonding film and the wafer.

8. The method according to claim 1, further comprising, after the step (f) and before the step (g), a step of heating the die bonding film for improving the adherence between the die bonding film and the wafer.

9. The method according to claim 1, further comprising the steps of:

heating the die bonding film to a first temperature after the step (d) and before the step (e); and

heating the die bonding film to a second temperature higher than the first temperature after the step (e) and before the step (f).

10. The method according to claim 1, further comprising

the steps of:

heating the die bonding film to a first temperature after the step (d) and before the step (e); and

heating the die bonding film to a second temperature higher than the first temperature after the step (f) and before the step (g).

11. The method according to claim 1,

wherein, in the step (e), the dicing tape is held by a holding means disposed around the wafer, and

wherein, in the step (g), the wafer affixed to the dicing tape held by the holding means is diced.

12. The method according to claim 1,

wherein, in the step (c), the wafer is ground to a thickness of not larger than 200 µm.

13. The method according to claim 1,

wherein the step (d) comprises the steps of:

- (d1) affixing a laminate of the die bonding film and a separator film to the second face of the wafer in such a manner that the die bonding film faces inside;
- (d2) peeling off the separator film; and
- (d3) cutting the die bonding film along an outer periphery of the wafer.

14. A method of fabricating a semiconductor device, comprising the steps of:

- (a) providing a wafer having a plurality of semiconductor elements formed thereon;
- (b) affixing a laminate of a die bonding film and a separator film to a back side of the wafer so that the die bonding film faces inside;
- (c) peeling off the separator film; and
- (d) cutting the die bonding film along an outer periphery of the wafer.

15. The method according to claim 14,

wherein the die bonding film contains a thermoplastic resin material.

16. The method according to claim 14,

wherein the separator film is harder than the die bonding film.

17. The method according to claim 14,

wherein the die bonding film functions as an adhesive layer at the time of die-bonding chips obtained by dicing the wafer.

18. A method of fabricating a semiconductor device,

comprising the steps of:

- (a) providing a wafer having a plurality of semiconductor elements formed thereon;
- (b) affixing a protective tape to a first face of the wafer;

- (c) grinding a second face of the wafer opposite to the first face;
- (d) affixing a laminate of a die bonding film and a separator film to the second face of the wafer so that the die bonding film faces inside;
- (e) peeling off the separator film;
- (f) cutting the die bonding film along an outer periphery of the wafer;
- (g) affixing a dicing tape over the die bonding film on the second face of the wafer;
- (h) peeling off the protective tape from the first face of the wafer; and
- (i) dicing the wafer.

19. The method according to claim 18,

wherein the die bonding film contains a thermoplastic resin material.

20. The method according to claim 18,

wherein the die bonding film functions as an adhesive layer at the time of die-bonding chips obtained by dicing the wafer in the step (i).